IT501 Algorithms (1.5-0-0-1.5)

Course Instructor : Chintan Shah
Term : Jul-Dec, 2009 (Course begins on 10th September, immediately after 1st mid sem)

Objectives and Outcomes:
This course teaches students how to analyze and design simple computer algorithms. Topics taught include
The running time of algorithms (Big-Oh notation),
Basic data types - arrays, linked lists, stacks, queues, trees,
Sorting techniques – selection sort, insertion sort, bubble sort, quicksort, merge sort,
Balanced trees – AVL trees, B-trees,
Hashing – chaining, linear probing, quadratic probing, double hashing, perfect hashing.

Evaluation Strategy:
The evaluation will place emphasis on clear understanding of the concepts taught in class as also the ability to extend the ideas by building on the information received through lectures.

<table>
<thead>
<tr>
<th>Weightage(%)</th>
<th>Evaluation Mechanism</th>
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<tbody>
<tr>
<td>20</td>
<td>Assignments, quizzes(informed/surprise)</td>
</tr>
<tr>
<td>25</td>
<td>2nd mid-semester examination</td>
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<tr>
<td>55</td>
<td>Final examination</td>
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